

WHAT IS CLAIMED IS:

1. An energy consumption efficiency improving agent which forms a substance having a large adherability to an applying object and a high adherence to a contacting object and greatly reduces energy loss, and attains improvement of an energy consumption efficiency substantially equal to three powers of adhesion improving rate under ordinary use conditions.

2. An energy consumption efficiency improving agent which is applied to an object to form a thin film of a viscosity of 100,000 cp or less and a thickness of 10  $\mu$ m or less throughout on a finely uneven surface of the object.

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3. The energy consumption efficiency improving agent according to claim 2, comprising a mixture of a flexible polymer binder which adheres to an organic material and an inorganic material and has a viscosity of 100,000 cp or less, and a solution-forming agent necessary to make the viscosity of the mixture 100 cp or less.

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4. The energy consumption efficiency improving agent according to claim 2, comprising a mixture of a flexible polymer binder which adheres to an organic material and an inorganic material and has a viscosity

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of 100,000 cp or less, an antislipping agent comprising fine particles of an average particle diameter of 10  $\mu$ m or less, and a solution-forming agent necessary to make the viscosity of the mixture 100 cp or less.

5. The energy consumption efficiency improving agent according to any one of claims 2 to 4, wherein a base material of the polymer binder is at least one selected from the group consisting of polyethylene; a methyl, phenyl, chloro, hydroxy, acetoxy, or cyano derivative of polyethylene; polybutadiene, a methyl or chloro derivative of polybutadiene; a copolymer of the polyethylene derivative and the butadiene derivative; silicone; polysulfide; and polyurethane.

6. The energy consumption efficiency improving agent according to any one of claims 2 to 4, wherein a base material of the polymer binder is at least one selected from the group consisting of silicone; polysulfide; polyurethane; modified epoxy resin; and modified acryl resin which are generated by condensation action of an external substance such as water during adhesion.

7. The energy consumption efficiency improving agent according to claim 3 or 4, wherein the solution-forming agent is a solvent which is capable of diluting

the binder, including a solvent which dilutes the binder by colloid formation, such as alcohols including isopropyl alcohol.

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8. The energy consumption efficiency improving agent according to claim 4, wherein the antislipping agent is a finely particulate inorganic material mainly comprised of silicon oxide, aluminum oxide, cerium oxide, or silicon carbide, or a finely particulate  
10 organic material such as a ground nutshell of a walnut.

9. An energy consumption efficiency improving method, comprising applying the energy consumption efficiency improving agent as set forth in any one of  
15 claims 1 to 4 to an object to form a thin film of a viscosity of 100,000 cp or less and a thickness of 10  $\mu$ m or less on a surface of the object.

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20 10. An article improved in energy consumption efficiency having a contact surface to be brought into contact with a surface of a support, and a thin film formed on the contact surface by application of the energy consumption efficiency improving agent as set forth in any one of claims 1 to 4, the film having a  
25 viscosity of 100,000 cp or less and a thickness of 10  $\mu$ m or less.

11. The article according to claim 10, which is a tire for a vehicle or a footwear.